



Connecticut Recycles

- **Nine items originally mandated for recycling (1991):**
 - Glass food containers; metal food containers
 - Scrap metal
 - High grade white office paper (non-residential)
 - Old corrugated cardboard
 - Old newspapers
 - Waste oil
 - Leaves
 - Lead-acid storage batteries
- **Two items added later:**
 - Ni-Cd rechargeable batteries
 - Grass

Additional Items Recycled by Individual Towns

- Most municipalities recycle additional materials (those with readily available markets)

- Plastic bottles - HDPE and PET -



- Old magazines



- Textiles



- Yard Waste



- Food waste (backyard compost & commercial pilots)



- <http://www.dep.state.ct.us/wst/compost/grotonpilot.htm>

Why Recycle?

- Saves energy



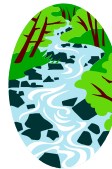
- Conserves natural resources



- Emits less pollution



- Uses less water



- Reduces the need for building additional disposal capacity

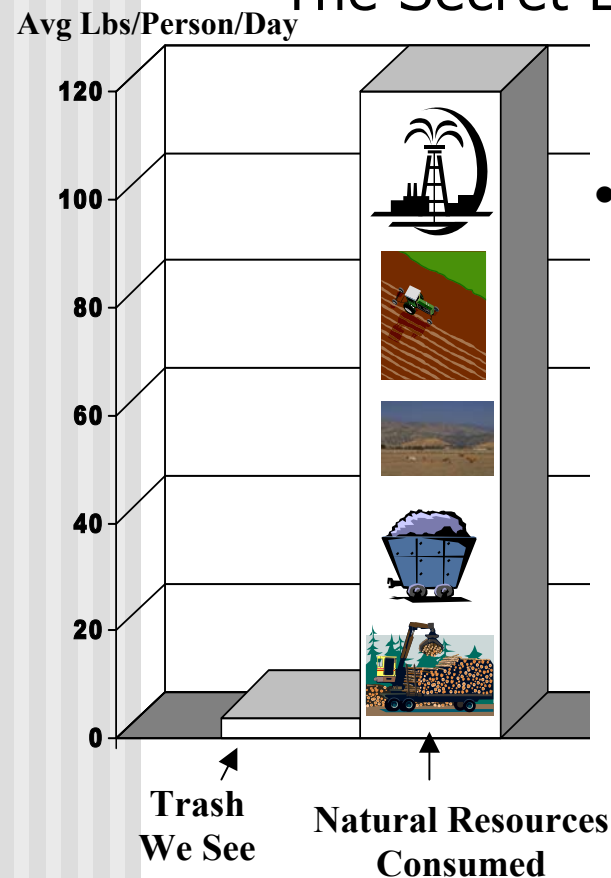


- Reduces greenhouse gas emissions



It's Not Just the Trash We Throw Out

- In 1997 John Ryan and Alan Durning in their book *Stuff - The Secret Life of Everyday Things* revealed:



- Each American throws out about 4 lbs trash each day. However, "though they only see a fraction of it. Americans consume 120 pounds - nearly their average body weight - every day in natural resources extracted from farms, forests, rangelands, and mines."

Based on Tons of MSW Recycled from CT in 2001

- CT 2001 recycling efforts reduced greenhouse gas emissions by 340,000 metric tons of carbon equivalents – Equal to 19.1% of all industrial CO₂ emissions from fossil fuel combustion in CT.
- CT 2001 recycling efforts saved a total of 6.9 trillion BTU's of energy (value of 35 million dollars). This energy savings is enough power for 3,700 homes for one year.
- CT 2001 recycling efforts for paper, plastic, glass, Al cans, steel cans resulted in reductions as much as 2,513 metric tons of water pollutants and 16,900 metric tons of air pollutants (not including GHG emission reductions). Recycling reduced overall emissions of sulfur oxides (contributes to acid rain formation) by 1400 metric tons - an amount equal to 4.7% of all such emissions from electrical utilities in the State. Nitrous oxides emissions were reduced by about 2,360 metric tons (an amount equal to 24% of such emissions from CT utilities)
- CT 2001 recycling of mixed paper, newsprint, phone books and office paper reduced the need to cut 4 million trees

National Recycling Economic Information (REI)

How does the size of the recycling industry compare to other major industries?

- Comparable to the auto and truck manufacturing industry
- Significantly larger than mining and waste management and disposal industries
- Wages for workers in the recycling are notably higher than the national average for all industries

REI – (cont'd)

- **Why is this industry an important contributor the nation's manufacturing base?**
- More than 56,000 public and private sector facilities
- 1.1 million jobs
- \$236 billion in gross, annual sales
- \$37 billion in annual payroll

Recycling Enforcement



- Responsibility for recycling enforcement is spread among:

DEP

Municipalities

Disposal Facilities

Haulers

Recycling Legislation Pertaining to Municipalities

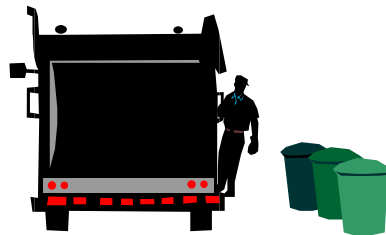
- It shall be the goal to recycle 25% of the solid waste generated in each municipality and to further reduce such waste by an additional 15% by source reduction or additional recycling
- Municipalities required (by Jan 1, 1991) to have a recycling ordinance to assure compliance with recycling requirements by persons within its boundaries.
- Municipalities required to make provisions for the separation, collection, processing, and marketing of designated recyclables generated within its borders
- Any hauler or collector of solid waste generated within a municipality must register with the municipality
- Each municipality shall notify the haulers in their town of recycling requirements- After such notice haulers are required to notify the municipality about any customer believed to be discarding designated recyclables with trash.

Recycling Legislation Pertaining to Municipalities (cont'd)

- Upon request of the municipality a hauler shall provide a warning notice to customers suspected of violating separation requirements.
- RRF operators shall notify the driver and municipality of loads containing significant amounts of recyclables
- Any municipality may establish a fine not exceeding \$1,000 for violation of a recycling ordinance. Any police officer or other person authorized by the CEO of a municipality may issue a citation to any person who commits such a violation
- If a municipality or hauler brings recyclables out-of-state - they must ensure by contract that the out-of-state facility report to CT DEP
- Municipalities required to submit an annual recycling report to DEP
- Municipalities must designate a recycling contact

Some Recycling Legislation Regarding Haulers

- Any collector or hauler of solid waste (includes recyclables) generated within a municipality shall register in that municipality.
- Collectors are required to notify the municipal recycling contact about any customer believed to be discarding designated recyclables with solid waste.
- Upon request of the municipality, a hauler shall provide a warning notice to customers suspected of violating separation requirements.
- Haulers shall also assist the municipality in identifying persons responsible for creating solid waste loads containing significant amounts of recyclables which were detected by the receiving resource recovery or solid waste facility.



Some Recycling Legislation Regarding Haulers (cont'd)

- Any hauler who knowingly mixes other solid waste with separated recyclables shall be liable for a civil penalty of not more than \$2,500 for each violation and not more than \$10,000 for a subsequent violation.



Recycling Legislation Regarding Generators

- Each person who generates solid waste from a residential property shall separate designated recyclables from other solid waste and every other person shall make provision for the separation of designated recyclables.
 - **State designated recyclables (by regulation and statute) include: glass and metal food containers, non-residential high grade white office paper, old newspaper, scrap metal, old corrugated containers, waste oil, lead acid storage batteries, leaves, grass. NiCd rechargeable batteries.**
- A municipality may impose a penalty not to exceed \$500 for each violation by a commercial establishment of recycling separation requirements.

<http://www.dep.state.ct.us/wst/recycle/businessrecy.htm>

Separating Recyclables from the Waste Stream

- Designated recyclables cannot be collected together with mixed MSW nor can they be mixed with any other material which may contaminate them



<http://www.dep.state.ct.us/wst/recycle/separate.htm>

Starting a Recycling Program in Your Place of Work

- Select a recycling coordinator or form a recycling or green team
- Perform a waste audit
- Identify materials to be recycled or source reduced
- Identify best method for aggregating material and getting it to a recycling processor or market
- Secure organizational support and commitment
- Make sure your current trash disposal contract takes economic advantage of decreased disposal tonnages
- Educate employees – Evaluate – Adjust
- Provide follow-up – i.e. Environmental Benefits etc.
- Choose to reuse and choose the recycled content product – all else being equal.

Resources for Reducing Waste Disposed

■ EPA WasteWi\$e Program

“WasteWi\$e is a free, voluntary, EPA program through which organizations eliminate costly municipal solid waste, benefiting their bottom line and the environment. WasteWi\$e is a flexible program that allows partners to design their own solid waste reduction programs tailored to their needs.”

- Reducing office paper waste by implementing a formal policy to duplex all draft reports, and by making training manuals and personnel information available electronically.
- Improving product design to use less materials.
- Redesigning packaging to eliminate excess material while maintaining strength.
- Working with customers to design and implement a packaging return program.
- Switching to reusable transport containers.
- Purchasing products in bulk.

<http://www.epa.gov/wastewise/about/overview.htm>

Waste Exchanges

- The material one company is seeking to get rid of, might be the material another company is looking to use.
- Before disposing, explore options for source reduction, reuse, and recycling. Waste exchanges may provide important reuse opportunities for your company

<http://www.dep.state.ct.us/wst/recycle/wexchange.htm>

Recycling at Your Small Business

- If you generate large amounts of a particular recyclable, economies of scale will make it easy for you to find a hauler to pick-up and recycle it.
- If you generate small quantities of the designated recyclables you need to be more inventive in identifying a cost-effective way for you to recycle.

Small Businesses Responsible for Own Trash Management

- Check with your municipal recycling coordinator to see if your town has a recycling drop-off site or can pick-up your recyclables using the residential infrastructure and a drop-off for white office paper and cardboard. If this is not feasible,
- Get together with other town businesses and your local chamber or other business association and have them work with the town to establish convenient, low cost, small business recycling options such as: recycling drop-off sites in convenient-to-use areas;
- Set-up cooperative recycling programs for joint pick-up and marketing of recyclables from groups of small businesses. Cooperative hauling contracts can either entail individual pick-up from each business or can involve the businesses bringing the recyclables to nearby consolidation points

Small Businesses in Leased Space with Other Businesses

- If the lease includes trash management i.e. collection container, hauling, etc make sure that recycling is also included.
- If the lease includes office cleaning services and bringing trash to collection container, again make sure recycling is included.

Recycling at Small Businesses - Pilot

- In 1996/1997 CT DEP and US EPA funded six pilot programs in CT municipalities to help small businesses to recycle. DEP presented workshops on the results.
- Under that same project, NERC published a pamphlet on setting-up small business recycling co-ops. <http://www.nerc.org/coop/index.html>

Buy Recycled

- We already do separate the recyclable material and send it to processing facilities.
- From the processing facilities (and sometimes directly) the material goes to an end market where it is used as a feedstock to manufacture a new product.
- But, how many of us are really completing the cycle and buying those post-consumer recycled content products? Without strong demand for such products - the loop is broken, and the system breaks down.

Buy Recycled (cont'd)

- There are a wide range of high quality, high performance recycled content as well as reusable and remanufactured products available in today's market.
- All things being equal (quality, price over the life of the product, availability) why would you not buy remanufactured or recycled content products?
- Recycled content paper products; re-refined motor oil; recycled toner and ink jet cartridges; any steel product; carpeting; glass tiles; recycled rubber products; etc. etc. etc.

<http://www.dep.state.ct.us/wst/recycle/buycycl.htm>

Buy Recycled Business Alliance

- Established by the [National Recycling Coalition](http://www.nrc-recycle.org/brba/) in 1992, the Buy Recycled Business Alliance (BRBA) is a group of organizations committed to increasing the procurement of recycled content products through education and leadership by example. <http://www.nrc-recycle.org/brba/>
- The BRBA has published a guide on buying recycled for purchasing managers
<http://www.nrc-recycle.org/brba/primer/brbamgrguide.PDF>

How are other CT Municipalities Promoting Business Recycling?

- Stonington utilizes a unit pricing system for its residential and commercial trash/recycling collection program. Currently the town is participating in a pilot program together with the town of Groton to compost source separated commercial food waste (restaurants, grocery stores, schools, nursing homes etc.). Visit the DEP website at <http://www.dep.state.ct.us/wst/compost/grotonpilot.htm>
- New Britain has continued its successful program to help small businesses recycle. In addition waste audits of businesses are provided by a non-profit organization-the Connecticut Business Environmental Council (CBEC).

How are Other CT Municipalities Promoting Business Recycling? (cont'd)

- The city of Norwalk picks-up corrugated cardboard, mixed paper and newspapers for local businesses.
- Middletown works closely with businesses to ensure compliance. The town issues newsletters and other mailing and provides free indoor and outdoor bins to businesses that recycle mixed paper. The town follows up on complaints with site visits. The city can impose fines and has fined a local hauler for non-compliance.
- Mansfield businesses are inspected on a regular basis and issued written warnings if they fail to comply with recycling requirements

How are Other CT Municipalities Promoting Business Recycling? (cont'd)

- Portland's white office paper program is especially noteworthy. They allow small businesses and private residents, including people from other communities to drop off high-grade white office paper and cardboard. As an added incentive to participate Portland gives a free ream of new recycled content paper to participants.
- Over the past decade Manchester has worked with apartment buildings, the large retail community at Buckland Hills, the Town parks and Recreation Department and schools to ensure that Manchester residents have an opportunity to recycle not only at home but also at school, at work and while enjoying leisure activities.
- Fairfield recycling officials go door to door to inspect for recycling violations and assist businesses with recycling education. Code meetings for new businesses include recycling info. Businesses in violation of recycling requirements are first given a verbal warning, then a written warning, and are then threatened with fines if still not complying.

How are Other CT Municipalities Promoting Business Recycling? (cont'd)

- Granby had worked through the Chamber to let businesses know about new recycling opportunities. The recycling coordinator has sent businesses letters or made phone calls to remind them about recycling mandates.
- Litchfield is revising their business recycling manual and is currently working with a major office complex and two post-offices on recycling junk mail and office paper. They have placed compactors in areas to encourage recycling by businesses.
- Windsor Locks recycling coordinator and DPW director conduct regular unannounced “spot checks” at businesses and provide technical assistance to help the businesses to implement aggressive recycling programs. They also have an enforcement program to deal with businesses which are reluctant to comply. Most Windsor Lock businesses are in complete compliance with recycling requirements.

AMERICA RECYCLE'S DAY
